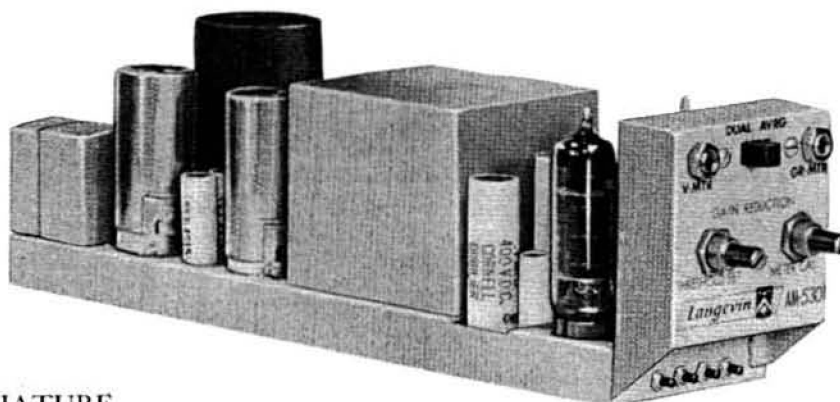


THE MODEL AM-5301 LEVELINE AMPLIFIER

+ 37 dbm OUTPUT (6 WATTS)



INTRODUCTION

This new limiter amplifier is a MINIATURE PLUG-IN unit which acts as an automatic averaging or as a peak level amplifier in TV-Broadcast, Microwave, Recording and Industrial Sound applications. It operates with a push-pull variable gain input stage driving a 2 stage push-pull program amplifier. Silicon rectifiers provide bias to regulate gain of the input stage. Decals are furnished to convert a VU meter to a Gain Reduction Meter.

Maximum program variations up to 30 db can be controlled, thus relieving studio personnel of many exacting level adjustments. In recording, this unit allows higher signal-to-noise ratios by loading the tape or disc; thus the engineer is not required to anticipate overloads. This anticipation results in lower signal to noise and lower maximum levels than those otherwise possible. The unit is equipped with a chassis control to set limiting and compressing action, along with a metering jack.

For recording use, accessories are available which include an extension bias meter and a threshold control, allowing continuously variable control of limiting during the program with console panel accessibility.

APPLICATIONS

EXPANDER-COMPRESSOR - With an average program material level sufficient to produce 15 db of gain reduction, the output signal will be compressed for incoming signals exceeding 15 db, and expanded for incoming signals below 15 db. Excellent for background music applications where the dynamic range should be compressed.

AUTOMATIC MASTER GAIN CONTROL - Simply replace the program amplifier by plugging in the Leveline Amplifier; the AM-5301 Leveline Unit replaces directly an AM-5117 used as a program amplifier or as a monitor amplifier of 6 watts by employing the same strapping used for the AM-5117.

AUTOMATIC LEVEL CONTROL FOR A REMOTE LINE --- The Leveline units permit unattended operation of the remote line.

AUTOMATIC CONTROL OF LEVEL DIFFERENCES BETWEEN 2 OR MORE PROGRAM SOURCES - Controls differences between turntables, projectors, network programs and microphone preamplifier sources.

USE AS A "DUCKER" - The AM-5301 permits automatic "ducking". A program can be automatically lowered the recommended 8 db (one-half loudness) to allow an announcer to override without apparent program interruption. The announcer begins to speak, and the background automatically lowers while allowing full announce level.

USE AS A NORMAL PROGRAM AMPLIFIER - If the Console Panel Accessory Controls are not employed, turning off the integral chassis bias limiting control allows operation as a conventional program amplifier; otherwise, regulating the console accessory bias limiting control to extreme "High" will accomplish the same action.

ELECTRICAL CHARACTERISTICS

GAIN:	53 db with 600 ohm input source
INPUT SOURCE:	125 to 600 ohms balanced or unbalanced
IMPEDANCE:	See chart on page 18 for proper loading resistor
OUTPUT POWER:	+37 dbm when strapped for monitor, +26 dbm strapped for Leveline operation.
OUTPUT NOISE:	Unweighted, equivalent to an input signal of -110 dbm or less over the band 20 - 20,000 cps

LIMITER AMPLIFIER

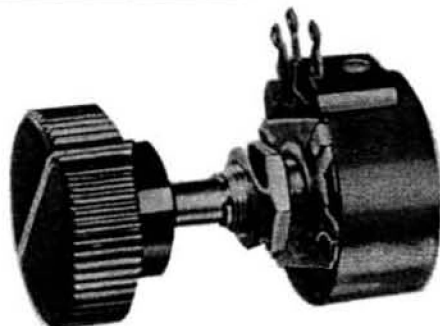
- FREQUENCY RESPONSE:** $\pm .5$ db 20-20,000 cps
- DISTORTION:** Less than 1% at +36 dbm operating levels including compression. Less than .5% at +26 dbm
- COMPRESSION RATIO:** Adjustable from 1.6:1 to 5:1 over a 30 db range at input with 4:1 being optimum
- ATTACK TIME:** 11 Milliseconds as supplied; resistor change permits lowering in increments down to 100 microseconds.
- RELEASE TIME:** For 63% recovery, .5 seconds in "dual" position; 3 seconds in "average" position.
- TUBE COMPLEMENT:**
- 1 - 12AY7-select (Langevin Model TUS-12AY7)
 - 1 - 6ES8 Variable Gain Input Amplifier (Langevin Model TUS-6ES8)
 - 2 - 6005 5 Star Output Amplifiers (Langevin Model TUS-6005)
- BIAS RECTIFIER:** 2 - Silicon Bias Rectifiers
- POWER REQUIREMENTS:** 6.3 Volts ac or dc at 1.5 amperes;
300 vdc at 90 ma strapped for monitor;
50 ma strapped for Levelline operation

MECHANICAL SPECIFICATIONS

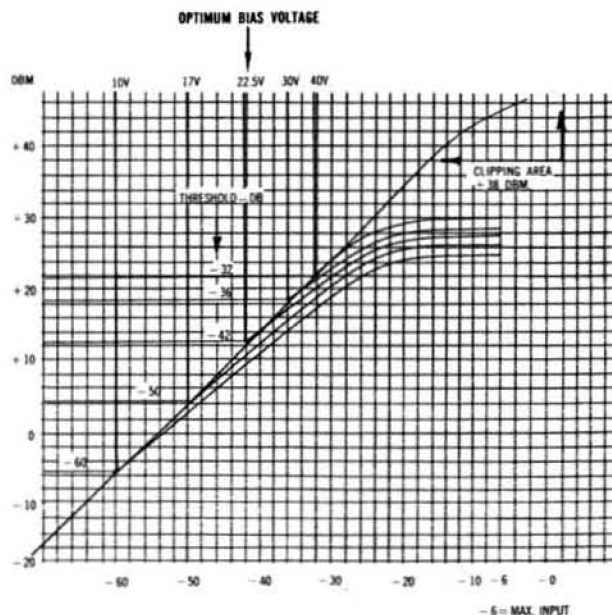
- MOUNTING TRAY:** Langevin Model TRY-5017
- FINISH:** Light gray baked enamel over 18 gauge bonderized (rustproofed) steel
- WEIGHT:** 4 lbs. net, shipping 5 lbs.
- SIZE:** Length 10 $\frac{1}{4}$ in., width 2 $\frac{5}{8}$ in., height 3 in.



METER



RESISTOR



RECOMMENDED ACCESSORIES

- Model MTR-507 Bias Voltmeter
- Model TRY-5017 Mounting Tray
- Model VR-112 100K Extension Bias Control
- Model TK-5301 Tube Kit

ORDERING INFORMATION

- MODEL AM-5301 LEVELINE AMPLIFIER**, complete, with tubes, weight 4 lbs. net, shpg. 5 lbs, **Price, Net, \$158.80**
- MODEL AM-5301 LEVELINE AMPLIFIER LESS TUBES**, same as above but less tubes, **Price, Net, \$145.00**
- MODEL TK-5301 TUBE KIT** for above, consisting of 1 each (Langevin Model TUS-6ES8), 2 each 6005 5 star (Langevin Model TUS-6005) and 1 each 12AY7, select, (Langevin Model TUS-12AY7). Weight, net $\frac{1}{4}$ lb., shipping $\frac{1}{2}$ lb., **Price, Net, \$13.80**
- MODEL MTR-507 BIAS VOLTMETER**, special scale marked for optimum operating point of AM-5301 Leveline Amplifier. Panel size is 1 $\frac{13}{16}$ in. round opening for rear panel mount, 1 $\frac{1}{8}$ in. square overall, depth is 1 $\frac{1}{8}$ in.; reading is 0-70 vdc, weight 3 oz. net, shipping 10 ozs., **Price, Net, \$15.00**
- MODEL VR-112 100K** continuously variable moulded composition resistor for panel mount bias limiting control of AM-5301, includes knob but no dial, weight 4 oz. net, shipping $\frac{1}{2}$ lb., ... **Price, Net, \$5.00**
- MODEL TRY-5017 MOUNTING TRAY** for above, with plug socket complete, **Price, Net, \$8.25**